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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,086	10/29/2001	Nathaniel T. Becker	GC644-3	8483
5100	7590	04/19/2004	EXAMINER	
GENENCOR INTERNATIONAL, INC. ATTENTION: LEGAL DEPARTMENT 925 PAGE MILL ROAD PALO ALTO, CA 94304			KUMAR, PREETI	
			ART UNIT	PAPER NUMBER
			1751	

DATE MAILED: 04/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/033,086

Applicant(s)

BECKER ET AL.

Examiner

Preeti Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address.--

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 28-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 28-42 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. The rejection of claims 1-19, 28-42 are rejected under 35 U.S.C. 103(a) as obvious over Herrmann et al. (US 6,248,706) is maintained for the reasons recited in the previous office actions and further explained below.

### ***Response to Arguments***

2. Applicant's arguments filed January 21, 2004 have been fully considered but they are not persuasive.

3. Applicant's urge that Herrmann et al do not provide a suggestion to combine an oxidoreductase at a concentration of about 10 to 350 U/g of particle with an active agent in the presence of a bleaching compound.

Herrmann et al. teach an activity-stable and low-dust enzyme granulate for washing and cleaning applications, e.g. for use in granular washing and cleaning agent compositions. See abstract. Herrmann et al. teach a method for preparation of an enzyme granulate for washing and cleaning applications comprising 0.1 to 25 parts by weight enzyme or enzyme mixture (calculated as dry substance content of the enzyme preparation that is used), 75 to 99.9 parts by weight (including moisture content) of an organic flour type with a degree of grinding of 30 to 100%, and where the parts by weight of the enzyme or enzyme mixture and of the flour type add up to 100 parts by weight. See col.2, ln.19-67. Furthermore, Herrmann et al. clearly state that the enzyme granulate may be coated with a coating containing an additional enzyme. See col.6, ln.28-35.

Specifically regarding claims 2 and 6, Herrmann et al. teach that the enzyme granulates contain a cellulase, lipase, catalase, oxidase, peroxidase, thermostable .alpha.-amylase or a protease. See col.8, ln.20-25. Please see col.7, ln.1-11, where Herrmann et al. teach that the enzyme or enzyme mixture can be a hydrolase, oxidase or reductase or a mixture thereof.

Specifically regarding claims 6-7, Herrmann et al. teach that the enzyme granulate can be fed to a high-speed mixer and after drying the enzyme granulate can additionally be coated in a customary way with a varnish or film or other protective coating. The coating or varnish can contain an additional enzyme or, alternatively can serve to color the granulate or for protection of the enzyme. See col.6, ln.8-45.

Specifically regarding claims 15-18, Herrmann et al. teach catalase enzymes are very practical enzymes for use in formulating an enzyme granulate for washing and cleaning and the genus *Aspergillus*, can be used for preparation of the enzyme or enzyme mixtures; other sources for appropriate enzymes are Ascomycetes, Streptomycetes, Humicola, or Micrococcus. See col.7, ln.10-30.

The prior art does not teach the specific concentration of the reductase catalase in baker units as recited by the instant claims.

However, Herrmann et al. provide motivation to modify the concentration of the enzyme that is used in the preparation of the enzyme granulate, dependent on the individual specific enzyme activity and the desired final activity of the enzyme granulate. See col.7, ln.15-20. Thus, it would have been obvious, to one of ordinary skill in the art, to modify the specific concentration of the hydrogen-peroxide:hydrogen-peroxide-

reductase (catalase) to encompass the broad range of concentrations as recited by the instant claims because Herrmann et al. provide motivation to modify the concentration of the enzyme.

Also, Herrmann et al. teach the advantageous benefits of using an enzyme-flour mixture core over the use of seed cores. Specifically, Herrmann et al. recite the advantage of using a granulate core of enzyme and flour type mixture to avoid the extrusion methods and structural varnishing on seed cores. However, Herrmann et al. do not teach away from using seed cores. Thus, one of ordinary skill in the art would have been apprised of the knowledge to utilize seed cores or enzyme flour mixtures in a method of formulating an enzyme granulate. Regarding Applicant's argument that the substitution of a seed core would not result in a core material made of an enzyme solution mixed with and distributed throughout a finely ground flour, the material limitations of the instant claims to not recite that an enzyme be distributed through the seed core.

4. In response to applicant's argument that the reference fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the combination of an oxidoreductase and an active agent in the presence of a bleaching compound) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

***New Grounds of Rejection***

***Election/Restrictions***

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-19, 28-42, drawn to a peroxide sensitive enzyme particle comprising a core made of an inorganic salt or sugar, clay, nonpareil, seed crystal classified in class 435, subclass 187.
- II. Claims 20-27, drawn to a method of stabilizing a peroxide sensitive enzyme comprising providing a core, classified in class 510, subclass 392.

Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are defined by the different core materials and the specific coating step recited in claim 20. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

2. During a telephone conversation with Janet Castaneda on Tuesday April 6, 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-19 and 28-42. Affirmation of this election must be made by applicant in replying to this Office action. Claims 20-27 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### ***Specification***

3. The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference. The

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amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

4. The attempt to incorporate subject matter into this application by reference to PCT application no. US 00/27888 and PCT/US No. 92/00384 is improper because the references are to unpublished documents. Examiner notes that the reference PCT application no. US 00/27888 is the same as the published WO 01/29170. However, no WIPO publication data for PCT/US No. 92/00384 could be found. Applicant is required to amend the specification to recite the published document to incorporate by reference.

#### ***Claim Objections***

5. Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 8 recites a concentration range that is broader than that recited by claim 1.

#### ***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 28 provides for the use of a particle in compositions, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 28 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.



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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 1-19, 28-42 rejected under 35 U.S.C. 103(a) as being unpatentable over a research disclosure by Novo Nordisk (RD 35346 A) dated September 1993.

This disclosure, RD 35346, teaches a method for producing an enzyme containing particle with a core and an enzyme containing shell. The core materials include sucrose, kaolin, potato starch. The enzymes may be selected from proteases, amylases, and lipases. See RD 35346 first paragraph. In paragraph 3, RD 35346 discloses the advantageous utility of catalase from *Aspergillus niger*. Also, in paragraph 2, the utility of peroxidase in the enzyme core is also disclosed. The disclosure RD 35346 illustrates an example where 780 g of catalase concentrate with a dry matter content of 14.3% is sprayed onto the surface of the sucrose core material to formulate an active, stable enzyme granulate. See paragraph 4.

However, disclosure RD 35346 is silent about the concentration of the catalase as recited by the instant claims.

It would have been obvious, to one of ordinary skill in the art, to modify the specific concentration of the hydrogen-peroxide:hydrogen-peroxide-reductase (catalase) to encompass the broad range of concentrations as recited by the instant claims because the disclosure RD 35346 provides motivation to coat a sucrose core with a catalase in the analogous process of formulating a stable enzyme granulate.

**Conclusion**

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Preeti Kumar whose telephone number is 571-272-1320. The examiner can normally be reached on M-F 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra N. Gupta can be reached on 571-272-1316. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Preeti Kumar  
Examiner  
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